User manual

HSS-ZA Combi-trimmer

plaster model trimmer

with left-side polishing motor

Figure: HSS-ZA Combi-trimmer

CE

WASSERMANN DENTAL-MASCHINEN GMBH

WASSERMANN DENTAL-MASCHINEN

Dear customer,

Thank you for choosing a product from the Wassermann range. Wassermann dental equipment incorporates the highest standards of quality and the latest technology.
In order to enjoy maximum performance and years of trouble-free operation, please read this instruction manual carefully before you connect this device and start work, and operate the device according to the recommended guidelines. The operation safety and the functionality of this device can only be guaranteed if you follow both the general safety guidelines and the applying laws to prevent accidents as well as the precautions given in this instruction manual. We are not liable for any damages which occur due to inappropriate usage or faulty operation of this device.

Make sure that anyone using this device has read and understood this instruction manual.

Keep this instruction manual in a safe place where it can be referred to as required at any time.

Company address:

Wassermann Dental-Maschinen GmbH
Rudorffweg 15-17
D-21031 Hamburg, Germany
Tel. : +49 (0)40 / 730 926 – 0 Fax.: +49 (0)40 / 730 37 24
E-mail: info@wassermann-dental.com
URL: http//www.wassermann-dental.com

WASSERMANN DENTAL-MASCHINEN
Die Basis für Ihr Labor

Contents

CONTENTS **2**

1 FOR YOUR SAFETY **4**

1.1 CORRECT USE OF THIS PRODUCT 4
1.2 SAFETY SYMBOLS USED IN THIS MANUAL 4
1.3 SAFETY GUIDELINES 5
1.4 POTENTIAL DANGERS 6
1.5 YOUR USER MANUAL 6
1.6 RESPONSIBILITY FOR OPERATION AND DAMAGE 6
1.7 AUTHORIZED USERS 7

2 CARE AND MAINTENANCE **7**

2.1 MAINTENANCE 7
2.2 CARE 8

3 USE/APPLICATION **8**

4 BEFORE YOU START **9**

4.1 UNPACKING / TRANSPORT 9
4.2 CONTENTS/ACCESSORIES 10
4.3 SET-UP AND STORAGE 11

5 OPERATION **12**

5.1 TECHNICAL DATA 12
5.2 WATER REGULATION 13
5.3 BRUSH SPINDLE 13

6 INSTALLATION **14**

6.1 LOCATION 14
6.2 RINSING WATER HOSE 14
6.3 DRAIN HOSE 15

7 ASSEMBLY **15**

7.1 INSTALLING THE ANGLED MOUNT 15
7.2 INSTALLING THE BRUSH SPINDLE 16

8 SUPPORTS 17

9 MAINTENANCE 17

9.1 SERVICING 17
9.2 TROUBLESHOOTING 17
9.3 FOIL GRINDING WHEELS 18
9.4 SPARE GRINDING DISCS 18
9.5 ITEM NO. OF SPARE GRINDING DISCS 19

10 WARRANTY 19

11 EC CONFORMITY CERTIFICATE 20

1 For your safety

1.1 Correct use of this product

HSS-ZA plaster model trimmer is used in dental laboratories and is designed **exclusively** for grinding (trimming) and polishing plaster models.

To prevent damage to the trimmer and/or to the blade, it must be used **only** with plaster.

1.2 Safety symbols used in this manual

Warning!
This is a warning of risk situations and dangers.
Failure to observe this warning could be life-threatening. These warnings must be observed.

Information!
This symbol draws your attention to specific features, which should be noted.

1.3 Safety guidelines

Servicing and repairs should be carried out only by authorised specialists.

Before you carry out any cleaning or maintenance work, disconnect the power plug and prevent the motor from restarting accidentally. You should also disconnect the water line.

Always wear eye protection when working on grinding wheels.

Electric motors have dangerous electrically conducting and rotating parts when in use. They can cause damage to health and property if operated incorrectly, used for other than their intended purpose or inadequately serviced.

Only qualified specialists should carry out work on the motor.

Condensers must be allowed to discharge completely before you open the unit.

<u>Never</u> switch from level "II" (high speed) directly to level "I" (low speed). Always select setting "0" (wait for wheel to stop) before making the speed change.

When working on the unit, wear close-fitting garments and roll sleeves inwards only. <u>Do not</u> wear gloves.

- **If you have long hair, wear some form of protection such as a hair net.**

When working with the HSS-ZA, do not wear rings, chains, bracelets or similar jewellery.

Be sure to shut off the tap at night and over the weekend.

1.4 Potential dangers

The tip of the brush spindle could cause injury.

The trimmer's rotating parts and the grinding blade are dangerous.

1.5 Your user manual

Configuring and operating this equipment requires precise knowledge and observance of the instructions in this user manual. The equipment is designed only for its intended application.

1.6 Responsibility for operation and damage

The responsibility for operating the unit lies exclusively with the owner or user if the said unit is incorrectly serviced, maintained or altered by persons not employed by an accredited dealer or if the unit is used in a manner contrary to its specified purpose.

The unit must be maintained and operated in accordance with this user manual. Wassermann Dental-Maschinen GmbH is not responsible for damage arising from the ***non-observance*** of these instructions.

Guarantee and responsibility provisions contained in the sales and supply conditions of Wassermann Dental-Maschinen GmbH are not extended by these instructions.

Product responsibility lapses if the equipment is altered by third parties or if non-original parts are installed. Use only original Wassermann replacement parts. If damage occurs after a "foreign wheel" has been installed, responsibility lies with the person who installed said replacement wheel.

1.7 Authorized users

The owner of the equipment must ensure that any users have been provided with the user manual and that they have read and understood its contents before operating the equipment.

Ensure that this user manual is accessible <u>at all times</u> and has been read and understood.

2 Care and maintenance

2.1 Maintenance

Before you carry out any cleaning or maintenance work, disconnect the power plug and prevent the motor from restarting accidentally.

Be sure to disconnect the water supply when carrying out this work.

Do not open the unit until the grinding wheel has come to a complete stop.

The HSS-ZA plaster model trimmer does not require any maintenance. However, if you open the wheel chamber for cleaning or to change the wheel, be sure to clean the sealing surfaces and coat them with a new application of water-insoluble grease (*Top 2000).*

For safety reasons, you should regularly check that the clamps on the water hose are tight.

Ensure that the bore of the removal nut for the brush spindle stays clean. Check the bore for dirt from time to time and clean if necessary. The brush spindle should be removed and the bore of the nut cleaned, especially after polishing with pumice.

2.2 Care

i **When mounting the brush spindle and the motor shaft (taper), always make sure that the brush spindle taper itself is clean and free of grease.**

3 Use/Application

The HSS-ZA trimmer is used for grinding (trimming) plaster models and can also be used for polishing.

***** Use this equipment only for its intended purpose! *****

4 Before you start

4.1 Unpacking / Transport

- Open the cartons, remove the packing materials, and carefully lift out the instrument and accessories. Check that the accessories are correct.

- When transporting the unit, use appropriate packing materials to avoid accidental damage.

Locate the user manual and read it carefully.

When unpacking, it is important to identify any accidental transport damage. If necessary, draw up an immediate status report.

4.2 Contents/Accessories

HSS-ZA including Dia-Quick grinding disc	**Item no.: 161996**
HSS-ZA including foil grinding disc	**Item no.: 161997**
Included in delivery	**Item no.:**
Inclined support	168037
Supply hose 1m	320006
Discharge hose 1m	320017
Brush spindle left	152025
Accessories	**Item no.:**
Polishing trough with extractor nozzle	143130
Polishing trough without extractor nozzle	143140
Polishing trough base complete	161115
Brush spindle left	152025
Brush spindle left (long version)	152044
Sealing grease for trimmer , 25 ml	629002
Puller for grinding disc change	164026

4.3 Set-up and storage

- When you set up the unit, make sure that the polisher side and the grinding wheel are accessible.

- You will need the high-pressure hose with the woven insert and a diameter of 1/2 inch (13 mm) when installing the *rinsing water hose*. You use the plastic hose with a diameter of 1 inch (25 mm) for the *drain hose*.

- When it comes to functional safety, the location of the trimmer is very important, even if it is only to be stored there for a short period. The location should be dry, well ventilated and free of vibration. An even temperature and a wooden base are desirable. **The trimmer must not be set up or stored out of doors.**

i **Warning!!! The trimmer must be at room temperature before you start it.**

5 Operation

5.1 Technical data

Voltage*	220–240 V / 50/60 Hz
Power consumption	3.5 A
Output	750 W
W x H x D	300 x 315 x 480 mm
Weight	19.6 kg
Sound level	≤ 70 dB(A)
Speed	1500 / 3000 min^{-1}
Duty	S6 - 40 %
Table dimensions projecting	120 mm
Spindle height	170 mm
Depth with spindle	525 mm

***Other voltages upon enquiry**

We reserve the right to make technical changes.

The noise emission measured in a 1-metre circle around the unit and 1.6 metres high at an average 50% idling, 30% average load and 20% full load was 69 dB(A). This was determined in accordance with DIN 45635 Part 1.

After you switch the trimmer on, wait a few seconds for the motor to come up to speed. Only then can you use its full power. Never push on the models so hard that the motor labours. This could overload it and cause possible damage.

5.2 Water regulation

The water supply is regulated at the tap. The flow of water is sufficient if the grinding wheel is close to its natural colour when grinding.
Grind using **only light pressure**, while moving the model slightly to the left and right.

You should, of course, always work with fully set plaster models, as wet plaster can cause blockages, especially in drain hoses.

5.3 Brush spindle

Use only **original brush spindles** as replacement parts as the spindle diameter must match the bore of the protective sleeve (removal nut), while leaving room for cleaning.

You turn the removal nut to the left when undoing and pushing off the brush spindle.

The brush spindle has a cross hole to make mounting and demounting brushes or polishing wheels easier. You insert a pin or suitable tool to hold the spindle and then simply screw the brush or polishing wheel in or out.

6 Installation

6.1 Location

Because the trimmer operates exclusively with water, we recommend you install it close to a tap, preferably at a washbasin.

6.2 Rinsing water hose

Locate the *rinsing water hose* (thinner hose with woven insert) between the tap and the hose connector on the trimmer. This connector is at the rear, under the motor. Use the clamps already on the hose to connect it, tightening them securely.

There should be a stopcock between the tap and the feed hose so the hose is not under continuous pressure when the trimmer is not being used.

i

Tighten the hose clamps again about 2 days after installation.

The tap must be turned off at night and over the weekend.

6.3 Drain hose

The drain hose must be laid out such that water can never back up in the trimmer. This would cause the water to spray out through the grinding wheel opening. Always arrange the hose in a smooth bend (not kinked) and with a permanent drop of at least 1 cm per metre.

The end of the drain hose must be <u>above</u> the water level of a plaster catcher.

The hose end must not be immersed in the water.

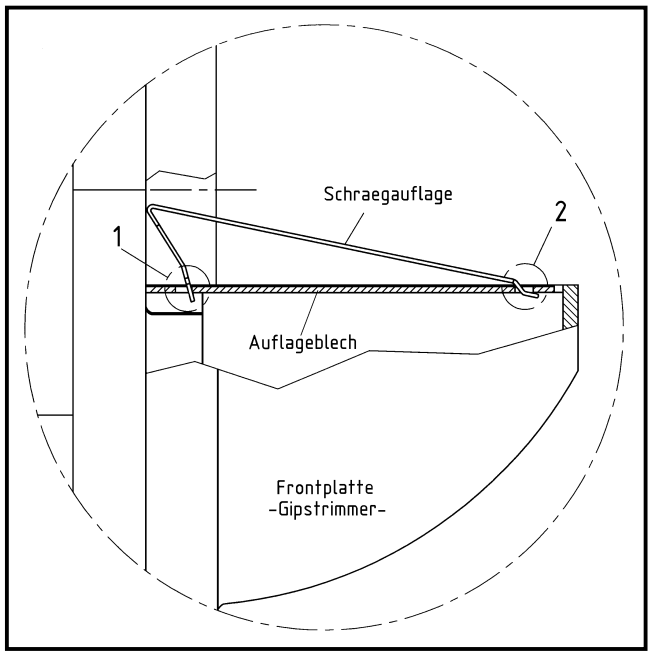
In its standard configuration, the drain-hose connection is *angled* off to the right. However, it can also be aligned *vertically* to the right, and this is recommended in difficult drain situations.
In that case, use a sealing cap instead of the drain connection.

7 Assembly

7.1 Installing the angled mount

The angled mount is inserted as required in the HSS-ZA support plate. Please follow the guidelines below.

When working with the angled mount, make sure that it has been installed correctly. It should be installed as shown in the diagram below.



Make sure that items 1 and 2 are inserted correctly in the support plate.

7.2 Installing the brush spindle

If the HSS-ZA is to be used as a polisher, you will need to install the brush spindle. First remove the nut and then use a cloth to degrease (remove corrosion protection) the shaft (taper), before screwing the nut on again.
Next clean the large bore of the brush spindle (inner taper) with compressed air so it is free of dirt and grime. Now install the brush spindle.
Tap the brush spindle **lightly** with a rubber or plastic hammer to seat it firmly on the tip.

Tap the spindle lightly or you could damage the ball bearings. This could void the warranty.

The brush spindle must run true when the motor is on. If it does not, sit the spindle at an angle on the taper. Repeat the installation procedure after first cleaning the bore and motor shaft again.

8 Supports

The HSS-ZA plaster trimmer does not need any other support than the one described in 7.1 *Installing the angled mount*.

9 Maintenance

9.1 Servicing

For details of maintenance, see *2.1 Maintenance.* Otherwise, the trimmer does not require any special maintenance.

9.2 Troubleshooting

Fault	Likely cause	Likely solution
Water spray at wheel opening	Water supply set too high	Reduce water pressure at tap or ball valve (see *5.2 Water regulation)*
	Drain hose has been lengthened with a *thinner* hose	Make sure that the diameter of the drain hose is 1 inch (25.4 mm)
	Drain hose is kinked	Make sure the hose is laid out without *kinks*
	Hose end is under the surface of the water in the plaster catcher	Make sure that the hose end is above the surface of the water
	The fall of the hose is insufficient	Ensure that the fall is at least 1 cm per metre
	The radius of the hose is too small	Ensure that the hose is laid out as straight as possible
	There is a tube bend in the hose (causing blow-back)	The bend must be increased to at least D = 40 mm

If the above suggestions do not fix the problem, contact your dental depot or our Service Department.

9.3 Foil grinding wheels

These wheels can be turned around and remounted after one side has been used up, thus allowing you to continue working. This increases wheel life considerably.

9.4 Spare grinding discs

Replacement wheels are always supplied with a tube of grease for sealing the wheel chamber.

We strongly advise against installing a replacement wheel on top of an already installed wheel, regardless of its origin and type.

Warning!
If diamond wheels are used, you will experience extreme wheel wear when grinding embedding materials and metals. We assume no responsibility for this.

When using a replacement wheel, follow the instructions provided for changing wheels.

9.5 Item no. of spare grinding discs

Spare Dia-Quick grinding disc, partly diamonded, including grease	162063
Spare foil grinding disc, 1 set = 4 pieces, including grease	162013
Spare foil grinding disc, fine, 1 set = 4 pieces, including grease	162023

10 Warranty

The warranty period for our equipment is 12 months. If faults occur within the warranty period, contact your dental depot or get in touch directly with our Service department. Your plaster model trimmer should only be operated in perfect condition. If faults occur which could harm operators or third parties, the unit should not be used until it has been fixed.

This warranty does not cover damage caused by improper use, external mechanical causes, transport damage or interference with the unit by unauthorized persons.

11 EC conformity certificate

in accordance with 2006/95/EG (low-voltage guidelines) and 2004/108/EG (EMV guidelines) and 98/37/EG (Machinery guidelines)

Manufacturer:	W A S S E R M A N N Dental-Maschinen GmbH Rudorffweg 15 - 17 D-21031 Hamburg	Product description:	Plaster model trimmer for dental applications
Model:	HSS-ZA incl. Dia-Quick grinding disc HSS-ZA incl. foil grinding disc		(161 996) (161 997)
Applicable standards:	DIN EN 61010-1:2004 DIN EN 61000-6-3:2005 DIN EN 61000-6-1:2002 DIN 45635-1:1984 DIN EN 60335-1:2007		

Hiermit wird bestätigt, dass die oben bezeichnete Maschine den genannten EG-Richtlinien entspricht. Diese Erklärung wird ungültig, falls die Maschine ohne unsere Zustimmung verändert wird.

This is to confirm that the above mentioned machine complies with the described EC rules. This declaration becomes invalid if the machine is modified without our approval.

Cette machine est conforme aux normes en vigueur de la Communité Européene. Cet avis est nul et non avenant si cette machine est modifiée sans notre accord.

Esta máquina, anteriormente mencionada, cumple con los limites requeridos por el reglamento EC. Ahora bien, esta declaración quedará invalidada en caso de realizar modificaciones al aparato sin nuestra aprobación.

Hiermee wordt bevestigd dat bovengenoemde machine voldoet aan de voorgeschreven EU normen. Deze verklaring verliest geldigheid als er zonder onze uitdrukkelijke toestemming wijzigen aan de machine worden aangebracht.

Place, date: Hamburg, 20.07.2007 Company stamp:

WASSERMANN DENTAL-MASCHINEN GMBH Rudorffweg 15-17 · 21031 Hamburg

Signed: _____

Wilfried Wassermann
(Managing Director)

Notes:

WASSERMANN Dental-Maschinen GmbH
Rudorffweg 15 – 17, D-21031 Hamburg

Tel.: + 49 (0)40 / 730 926 – 0
Fax: +49 (0)40 / 730 37 24

e-mail: info@wassermann-dental.com

Internet: http://www.wassermann-dental.com